Approved for use through 07/31/2006. OMB 0651-0031 FER 1 0 2006 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE red to respond to a collection of information unless it displays a valid OMB control number ation Number 10/080,212 & TRADEMAS TRANSMITTAL fling Date February 21, 2002 ED 1 0 2006 **FORM** First Named Inventor De et al. Art Unit all correspondence after initial filing) 2661 **Examiner Name** Robert W. Wilson Attorney Docket Number I-2-0173.2US Total Number of Pages in This Submission **ENCLOSURES** (Check all that apply) After Allowance communication Fee Transmittal Form Drawing(s) to Technology Center (TC) Appeal Communication to Board Licensing-related Papers Fee Attached of Appeals and Interferences Appeal Communication to TC Amendment/Reply (Appeal Notice, Brief, Reply Brief) Petition to Convert to a Proprietary Information After Final **Provisional Application** Power of Attorney, Revocation Status Letter Affidavits/declaration(s) Change of Correspondence Address Other Enclosure(s) (please Terminal Disclaimer Extension of Time Request Identify below): Form PTO-1449 Request for Refund **Express Abandonment Request** Supplemental Information Disclosure Statement CD, Number of CD(s) Remarks Certified Copy of Priority Document(s) Response to Missing Parts/ Incomplete Application Response to Missing Parts under 37 CFR 1.52 or 1.53 SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT Firm Michael L. Berman Reg. No. 51,464 Volpe and Koenig, P.C. Individual name Signature Memen Date

CERTIFICATE OF TRANSMISSION/MAILING

February 7, 2006

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

| Typed or printed name | Michael L. Berman | | |
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| Signature | MBernan | Date | February 7, 2006 |

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Our File: I-2-0173.2US

February 7, 2006

Date:



In the PATENT APPLICATION of:

De et al.

Application No.: 10/080,212

Confirmation No.:

2914

Filed:

February 21, 2002

For: SI

SINGLE USER DETECTION USER

EQUIPMENT

Group:

2661

Examiner:

Robert W. Wilson

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT INCLUDING RULE 1.704(d) STATEMENT

Mail Stop Amendment Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

Further to Applicants' Duty of Disclosure pursuant to 37 C.F.R. §1.56, Applicants wish to bring to the Examiner's attention the material cited on the enclosed PTO-1449 form. Newly cited documents are indicated by an asterisk (*).

Pursuant to 37 C.F.R. §1.98(a)(2)(ii), copies of the newly cited U.S. publications and/or patent documents have not been included.

In the spirit of Rule 1.704(d), the undersigned certifies that each newly cited item of information contained in this Supplemental Information Disclosure Statement was cited in a communication in a counterpart U.S. application, and that this communication was not received by any individual designated in §1.56(c) more than

Applicant: De et al. Application No.: 10/080,212

thirty (30) days prior to the filing of the supplemental information disclosure statement.

It is respectfully requested that the Examiner consider these documents and return an initialed copy of the PTO-1449 form indicating his/her consideration of the cited materials.

Respectfully submitted,

De et al.

Michael L. Berman

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MLB/ks Enclosure

FFR 1 0 2006 FORM PTO-1449 ATTY, DOCKET NO. SERIAL NO. I-2-0173.2US 10/080,212 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE **APPLICANT** De et al. INFORMATION DISCLOSURE **FILING DATE GROUP** STATEMENT BY APPLICANT February 21, 2002 2661 (Use several sheets if necessary) U.S. PATENT DOCUMENTS EXAMINER FILING DATE IF APPROPRIATE INITIAL DOCUMENT NUMBER DATE CLASS SUBCLASS 5,157,688 10/1992 Dell-Imagine 12/1994 5,337,226 Davis 5,377,225 12/1994 Davis Young et al. 5,477,225 12/1995 07/1997 5,648,983 Kostic et al. 6,064,689 05/2000 Vollmer et al. 2002/0126619 09/2002 De et al. 2002/0126646 09/2002 De et al. 2002/0131383 09/2002 De et al. 2002/0136160 09/2002 De et al. 2002/0141366 10/2002 De et al. 2002/0141372 10/2002 De et al. 2002/0141373 10/2002 De et al. 2002/0154599 10/2002 De et al. 2002/0154619 10/2002 De et al. 2002/0159383 10/2002 De et al. 2002/0159428 10/2002 De et al. OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) Ramjee Prasad, Werner Mohr and Walter Konhauser editors, Third Generation Mobile Communication Systems, Artech House, Boston, 2000. Anja Klein, Ghassan Kawas Kaleh and Paul Walter Baier, "Zero Forcing and Minimum Mean-Square Error Equalization for Multiuser Detection in Code-Division Multiple-Access Channels", IEEE Trans. on Vehicular Technology, Vol.45, No. 2, pp. 276-287, May 1996. Naja Klein, "Data Detection Algorithms Specially Designed for the Downlink of CDMA Mobile Radio Systems", IEEE 47th Vehicular Technology Conference, pp. 203-207, May 1997.

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Sheet 2 of 2 ATTY. DOCKET NO. FORM PTO-1449 SERIAL NO. I-2-0173.2US 10/080,212 U.S. DEPARTMENT OF COMMERCE **APPLICANT** PATENT AND TRADEMARK OFFICE De et al. INFORMATION DISCLOSURE FILING DATE **GROUP** STATEMENT BY APPLICANT February 21, 2002 2661 (Use several sheets if necessary) OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) H.R. Karimi and N.W. Anderson, "A Novel and Efficient Solution to Block-Based Joint-Detection using Approximate Cholesky Factorization", Personal, Indoor and Mobile Communications PIMRC' 98, Conference Proceedings, Vol. 3, pp. 1340-1345, Sept. 1998, Boston, MA. ETSI STC SMG2 Layer 1 Expert Group, "Low Cost MMSE-BLE-SD Algorithm for UTRA TDD Mode Downline" Tdoc SMG2 UMTS L1, Helsinki, Finland, Sept. 1998. 3G TS 25.102 V3.4.0, 2000-10, "UTRA (TDD) Radio Transmission and Reception", 3rd Generation Partnership Project, Technical Specification Group RAN WG4, Annex B., pp. 37. Lang Tong; Guanghan xu; Kailath T: "Blind identification and equalization based on second -order statistics: a time domain approach", IEEE Trans. Inf. Theory (USA), IEEE Transactions on Information Theory, March 1994, USA, ISSN 0018-9448, VOL-40, NR 2, pages 340-349 Benvenuto N. et al. "Joint Detection With Low Computational Complexity For Hybrid TD-CDMA Systems" VTC 1999-Fall. IEEE VTS 50th. Vehicular Technology Conference. Gateway to the 21st Century Communications Village. Amsterdam, Sept. 19-22, 1999, IEEE Vehicular Technology Conference, NY Vandaele P. et al. "Recursive Total Least Squares Algorithm for Single-User Blind Channel Equalisation: IEE Proceedings: Vision, Image and Signal Processing, Institution of Electrical Engineers, FB, Vol 147, No. 3, 23 June 2000 Yang et al., "Fast Joint Detection with Cyclic Reduction Exploiting Displacement Structures", 2000 IEEE International Conference on Acoustics, Speech and Signal Processing, Istambul, Turkey, June 2000 Proakis et al., "Digital Signal Processing", Macmillan Publishing Company, New York, NY, 1992, p. 835, para. 11.3.1, p. 890, para. 12.3.2 Vollmer et al., "Joint-Detection Using Fast Fourier Transforms in TD-CDMA Based Mobile Radio Systems", International Annual Conference of ICT, 1999, pp. 1-7, p. 1, para. 1, p. 2, para. II, p. 3, para. III, p. 4, para. IV. Pigeonnat, "Alternative Solutions for Joint Detection in TD/CDMA Multiple Access Scheme for UMTS", IEEE Signal Processing Workshop on Signal Processing Advances in Wireless Communications, May 1999, pp. 329-332, p. 329, para. 2.

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